



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/593,022

09/15/2006

Gerhard Gross

R.308338

5709

2119 7590 10/17/2008
RONALD E. GREIGG
GREIGG & GREIGG P.L.L.C.
1423 POWHATAN STREET, UNIT ONE
ALEXANDRIA, VA 22314

EXAMINER

CHARLES, MARCUS

ART UNIT

PAPER NUMBER

3656

MAIL DATE

DELIVERY MODE

10/17/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/593,022	Applicant(s) GROSS ET AL.	
	Examiner Marcus Charles	Art Unit 3656	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 September 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 6-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 6-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 September 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>9-15-2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This is the first action relating to serial application number 10/593,022 filed 09-15-2006.

Claims 6-15 are currently pending.

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

2. The examiner has accepted the drawing filed with this application as formal drawing.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 6, 8, 10, 12, 10 and 14-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burton (6,270,259) in view of Shiraki et al. (6,853,104). Burton discloses a sintered slide bearing (32) having a bore (42) having a surface region for accommodating a shaft having a capillary gap and is saturated with lubricant, the surface region of the bore has zones (44/48) of different density (col. Lines 10-23). Burton fails to disclose the oil is a low-viscosity poly-alpha-olefin lubricant. Shiraki et al. disclose a bearing (3) being sintered bearing for a motor, and the being is impregnated with poly-alpha olefin lubricant. Therefore, it would have been obvious to one of ordinary

Art Unit: 3656

skill in the art at the time of the invention to provide the bearing of Burton with low-viscosity poly-alpha-olefin lubricant in view of Shiraki et al. in order to increase durability between the shaft and the bearing and to reduce wear/friction.

5. Claims 7, 9, 11 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burton (6,270,259) in view of Shiraki et al. as applied to claim 6 above, and further in view of JP (06-184576). The combination of Burton and Shiraki et al. fail to disclose the lubricant having a viscosity at 40°C is 22 mm²/s (cSt) and at 100°C is 4.8 22 mm²/s (cSt). JP (06-184576) discloses a lubricant containing having a viscosity of low-viscosity poly-alpha-olefin such that the viscosity at 40°C is 2-15 mm²/s (cSt) and at and at 100°C is 1-4 mm²/s (cSt). It is well known in the art that such oils with such low viscosity has an advantage of reducing friction and wear without dissipating to high temperatures. However, the prior art fails to disclose the exact value as claim. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the lubricant of Burton such that it has the viscosity of JP (06-184576) or that as claimed invention for reducing friction and wear without dissipating to high temperatures. In addition, since it has been held to be within the general skill of a worker in the art to select a known material such as the claimed poly-alpha olefin on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416.

Regarding claims 9-11, the combination of Burton and Shiraki et al. fails to disclose the length to width ratio of the gap. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the capillary gap so as to

Art Unit: 3656

include the claimed ratios of Burton, since it has been held that where the general conditions of a claim is disclosed in the prior art, discovering the optimum ranges involves only routine skill in the art. In re Aller, 105 USPQ 233.

Regarding claims 12-15, Burton failed to disclose an electric machine having the bearing as claimed. Shiraki et al. discloses an electric machine (fig. 1) having a sintered bearing. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide the bearing of Burton on an electric machine in view of Shiraki et al. in order to reduce friction, the development of heat thus increasing the efficiency of the machine.

Citation

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Note the prior art cited in attached PTO Form 892.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marcus Charles whose telephone number is (571) 272-7101. The examiner can normally be reached on Monday-Thursday 7:30 am to 6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ridley Richard can be reached on (571) 272-6917. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3656

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Marcus Charles

/Marcus Charles/

Primary Examiner, Art Unit 3656

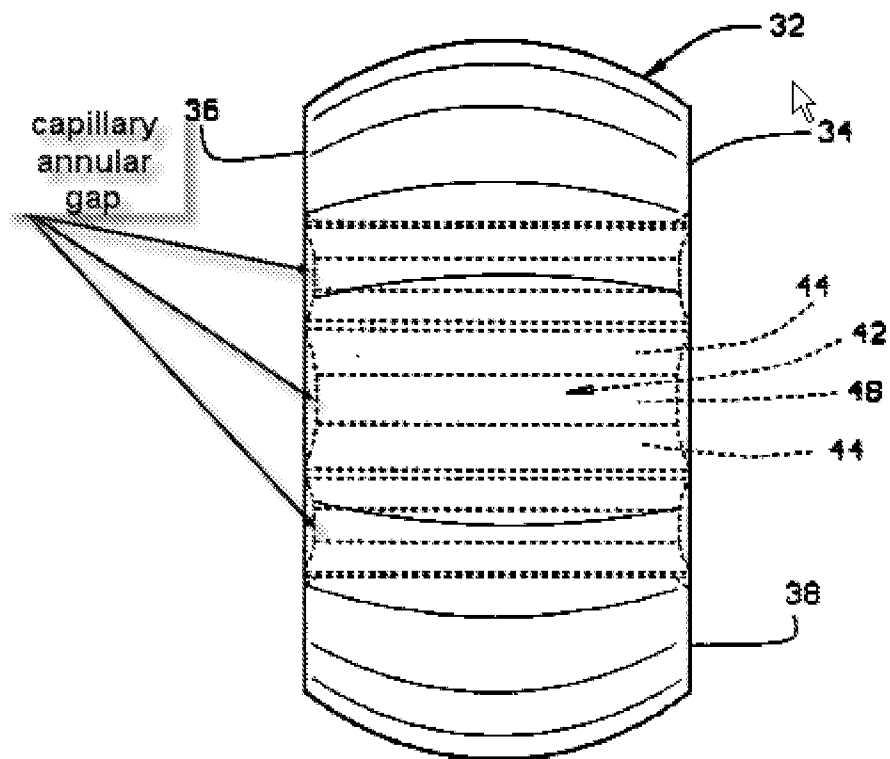


FIG. 5